

RECEIVED  
CENTRAL FAX CENTER  
JUL 27 2007

**AMENDMENTS TO THE CLAIMS:**

1. (Currently Amended) An interbody fusion spacer, comprising:  
an elongated generally cylindrical body having a first end wall, a second end wall and a side wall cooperating to define an interior chamber, said first and second end walls ~~formed integral with said side wall being fixed and non-removable relative to said elongated body;~~  
at least one of said first end wall and said second end wall having an end wall discontinuity;  
a side wall discontinuity extending along a length of said body aligned with the end wall discontinuity and configured for nesting with an adjacent spacer; and  
said side wall discontinuity defining a side wall opening to said interior chamber.
2. (Original) The spacer of claim 1 wherein said body is comprised of metal.
- 3.-4. (Cancelled)
5. (Previously Presented) The spacer of claim 1, wherein said side wall defines a plurality of openings therethrough for bone ingrowth extending into said interior chamber.
6. (Previously Presented) The spacer of claim 1, wherein one of said end walls defines a tool engaging hole for receiving a driving tool for implanting the spacer.
7. (Previously Presented) The spacer of claim 1, further comprising an osteogenic material disposed within said chamber.
8. (Original) The spacer of claim 7, wherein said osteogenic material comprises demineralized bone, a calcium phosphate material, a bioceramic, bioglass, an osteoinductive factor and mixtures thereof.

9. (Original) The spacer of claim 1, wherein said side wall opening is defined by a side wall discontinuity in said side wall that extends over at least about 10% of the circumference of said body but not exceeding about 50% of the circumference of said body.

10. (Original) The spacer of claim 9, wherein said side wall discontinuity extends over at least about 20% of the circumference of said body but not exceeding about 40% of the circumference of said body.

11. (Original) The spacer of claim 1, wherein said side wall opening is defined by a side wall discontinuity that extends over at least about 50% of the length of said body.

12. (Currently Amended) ~~The spacer of claim 1, wherein~~ An interbody fusion spacer, comprising:

an elongated generally cylindrical body having a first end wall, a second end wall and a side wall cooperating to define an interior chamber, said first and second end walls formed integral with said side wall;

at least one of said first end wall and said second end wall having an end wall discontinuity;

a side wall discontinuity extending along a length of said body aligned with the end wall discontinuity and configured for nesting with an adjacent spacer, said side wall discontinuity extending over at least about 80% of the length of said body; and

said side wall discontinuity defining a side wall opening to said interior chamber.

13. (Previously Presented) An interbody fusion spacer, comprising:  
an elongated generally cylindrical body having a first end, a second end and a side wall connecting said first end and said second end, said body defining an interior chamber;  
a side wall discontinuity extending along a length of said body and configured for nesting with an adjacent spacer; and  
said side wall discontinuity defining a side wall opening to said interior chamber; and

wherein said side wall opening is sized to extend along at least about 50% of said length of said body to allow passage of osteogenic material into said interior chamber.

14. (Original) The spacer of claim 1, wherein said end wall discontinuity defines a concave surface.

15. (Original) The spacer of claim 1, wherein said end wall discontinuity is configured for nesting with an adjacent spacer.

16. (Cancelled)

17. (Currently Amended) The spacer of claim 1, ~~having~~ wherein each of said first and second end walls defines a concave end wall discontinuity, and wherein each of said concave end wall discontinuities is configured to receive an outer convex surface of an adjacent spacer.

18. (Previously Presented) The spacer of claim 1, wherein each of said end walls are configured for nesting with an adjacent spacer to form a spacer assembly having a width less than the sum of the combined maximum diameters of said spacers.

19. (Cancelled)

20. (Previously Presented) An interbody fusion implant system, comprising:  
the interbody fusion spacer of claim 1; and  
a second interbody fusion spacer having a second elongated body nested within said side wall discontinuity of the interbody fusion spacer of claim 1.

21.-34. (Cancelled)

35. (Currently Amended) The implant system of claim 34 71, wherein at least one of said first interbody fusion spacer and said second interbody fusion spacer comprise a tool engaging end defining a tool engaging hole for receiving a driving tool for implanting the spacers.

36. (Currently Amended) The implant system of claim 34 71, wherein said first interbody fusion spacer and said second interbody fusion spacer are comprised of metal.

37. (Currently Amended) The implant system of claim 34 71, wherein ~~first~~ said elongated body has a first plurality of openings for bone ingrowth extending into said interior cavity.

38.-51. (Cancelled)

52. (Previously Presented) An interbody fusion spacer, comprising:  
an elongate, generally cylindrical body having external threads and comprised of metal and having end walls and a side wall extending between said end walls, said side wall and said end walls defining an interior chamber, said side wall defining a main side wall opening configured to extend along at least about 50% of the length of said body for passage of osteogenic material into said interior chamber, said side wall further defining a plurality of secondary side wall openings communicating with said interior chamber for bone ingrowth into said interior chamber;

said end walls each having an external profile comprising a first portion defining an arc of a circle, said arc extending from 180° to 324° around the circle, said external profile also comprising a second portion defining a concave surface with said main side wall opening extending through said concave surface and into communication with said interior chamber;

said side wall having an external profile defining an arc of a circle, said arc extending from 180° to 324° around the circle and aligned with the arc defined by said end walls.

---

Page 6 of 16

Response to final Office Action and Advisory Action  
Application Serial No. 09/869,813  
Inventors: Boyd et al.  
Filing Date: January 3, 2002

53. (Cancelled)

54. (Previously Presented) The interbody fusion spacer of claim 52, wherein said end walls are formed integral with said side walls.

55. (Cancelled)

56. (Previously Presented) The interbody fusion spacer of claim 52, wherein said side wall has surface features for resisting expulsion from an intervertebral space.

57. (Cancelled)

58. (Cancelled)

59. (Previously Presented) The spacer of claim 1, wherein said elongated body has an outer surface defining threaded bone engaging portions.

60. (Currently Amended) ~~The spacer of claim 1, wherein~~ An interbody fusion spacer, comprising:

an elongated generally cylindrical body having a first end wall, a second end wall and a side wall cooperating to define an interior chamber, said first and second end walls formed integral with said side wall and each of said first and second end walls are fixed and non-removable relative to said elongated body;

at least one of said first end wall and said second end wall having an end wall discontinuity;

a side wall discontinuity extending along a length of said body aligned with the end wall discontinuity and configured for nesting with an adjacent spacer; and

said side wall discontinuity defining a side wall opening to said interior chamber.

---

Page 7 of 16

Response to final Office Action and Advisory Action  
Application Serial No. 09/869,813  
Inventors: Boyd et al.  
Filing Date: January 3, 2002

61. (Previously Presented) The spacer of claim 1, wherein each of said first and second end walls defines an end wall discontinuity aligned with said side wall discontinuity.

62. (Previously Presented) The spacer of claim 13, wherein said elongated body has an outer surface defining threaded bone engaging portions.

63. (Previously Presented) The spacer of claim 13, wherein said first end comprises a first end wall, said second end comprising a second end wall, each of said first and second end walls cooperating with said side wall to define said interior chamber.

64. (Previously Presented) The spacer of claim 63, wherein each of said first and second end walls are formed integral with said side wall.

65. (Currently Amended) ~~The spacer of claim 63, wherein~~ An interbody fusion spacer, comprising:

an elongated generally cylindrical body having a first end wall, a second end wall and a side wall connecting said first end wall and said second end wall, each of said first and second end walls cooperating with said side wall to define an interior chamber, each of said first and second end walls are fixed and non-removable relative to said elongated body;

a side wall discontinuity extending along a length of said body and configured for nesting with an adjacent spacer, said side wall discontinuity defining a side wall opening to said interior chamber; and

wherein said side wall opening is sized to extend along at least about 50% of said length of said body to allow passage of osteogenic material into said interior chamber.

66. (Previously Presented) The spacer of claim 63, wherein at least one of said first and second end walls defines an end wall discontinuity aligned with said side wall discontinuity.

67. (Previously Presented) The spacer of claim 66, wherein said end wall discontinuity defines a concave surface that is configured for nesting with an adjacent spacer.

68. (Previously Presented) The spacer of claim 13, further comprising an osteogenic material disposed within said interior chamber.

69. (Previously Presented) The spacer of claim 13, wherein said side wall defines a plurality of openings therethrough for bone ingrowth extending into said interior chamber.

70. (Currently Amended) ~~The spacer of claim 13,~~ An interbody fusion spacer,  
comprising:

an elongated generally cylindrical body having a first end, a second end and a side wall connecting said first end and said second end, said body defining an interior chamber;

a side wall discontinuity extending along a length of said body and configured for nesting with an adjacent spacer, wherein said side wall discontinuity extends over at least about 80% of said length of said body;

said side wall discontinuity defining a side wall opening to said interior chamber; and  
wherein said side wall opening is sized to extend along at least about 50% of said length of said body to allow passage of osteogenic material into said interior chamber.

71. (Currently Amended) ~~The spacer of claim 34, wherein~~ An interbody fusion implant system, comprising:

a first interbody fusion spacer having an elongated body, said elongated body having a circumference with external threads, a first end defining a first end wall, a second end defining a second end wall, and a side wall formed integral with said first end wall and said second end wall and defining an interior cavity, each of said first and second end walls are fixed and non-removable relative to said elongated body, at least one of said end walls having a discontinuity extending along a length of said body and into said side wall, said discontinuity in said side wall defining an opening in communication with said interior cavity, said side wall having said

discontinuity and said end wall having said discontinuity both extending about said circumference of said body to substantially the same extent; and  
a second interbody fusion spacer nested within said discontinuity defined by said first interbody fusion spacer.

72. (Currently Amended) The spacer of claim 34 71, wherein said end wall discontinuity defines a concave surface that is configured for nesting with said second interbody fusion spacer.

73. (Currently Amended) The spacer of claim 34 71, wherein said side wall opening is sized to extend along at least about 50% of said length of said body to allow passage of osteogenic material into said interior cavity.

74. (Currently Amended) The spacer of claim 73, further comprising an osteogenic material disposed within said ~~chamber~~ interior cavity.

75. (Previously Presented) The spacer of claim 52, wherein said plurality of secondary side wall openings extends through said external threads and into communication with said interior chamber.

76.-82. (Cancelled)